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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,543	11/20/2003	Tomas I. Babic	08215-539001	5678
26171 7590 12/17/2007 FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER VORTMAN, ANATOLY	
			ART UNIT 2835	PAPER NUMBER
			MAIL DATE 12/17/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/716,543	BABIC ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Anatoly Vortman	2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 November 2007 (Election).
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 and 9-39 is/are pending in the application.
- 4a) Of the above claim(s) 1-7, 9-24, 38 and 39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 1-7, 9-24, 38, and 39, are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11/09/2007.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 34 and 36, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 34 recites the limitations: “approximately 250° F and 400° F” and claim 36 recites the limitations: “approximately 100° F and 200° F”, which render claims indefinite. The terms are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree (i.e. the degree of the approximation or of the tolerances), and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

*Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 25, 31-33, and 35, are rejected under 35 U.S.C. 102(b) as being anticipated by US/4,349,803 to Tobin (of record).

Regarding claim 25, the method of reinforcing a fuse is inherent in the structure of Tobin. Tobin teaches (Fig. 1, 2) a method of reinforcing a fuse comprising: providing an electrical assembly, the electrical assembly comprising two electrical contacts (14, 16) accessible from an exterior of a fuse and a fuse element in contact with the two electrical contacts (14, 16) (col. 3, lines 45-57); surrounding at least a portion (14, 16) of the electrical assembly by a pre-formed tubular support structure (50) (col. 4, lines 51-53); after surrounding at least a portion of the electrical assembly (14, 16) by the preformed tubular support structure (50), applying a reinforcing structure (40) over the pre-formed tubular support structure (50) and in contact with at least a portion of the electrical assembly (14, 16), wherein the reinforcing structure comprises a fiber matrix, the fiber matrix comprising fibers pre-impregnated with resin (col. 4, lines 1-9).

Regarding claims 31, 32, 33, and 35, Tobin disclosed that the post application processing comprises curing (col. 5, lines 30+) and heating of the fuse and of the electrical assembly (col. 4, lines 49+, since molding in the context of the Tobin's disclosure, inherently involves heating).

*Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 34 and 36, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobin taken alone.

Regarding claims 34 and 36, Tobin disclosed all, but that heating is between approximately 250° F and 400° F and between approximately 100° F and 200° F .

It would have been obvious to a person of ordinary skill in the fuse art at the time of the invention to heat the fuse at components thereof at any suitable temperature, including as claimed, in order to achieve proper molding and subsequently desired mechanical characteristics of the end product, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

8. Claims 27-30 and 37, are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobin in view of US/3,979,709 to Healey, Jr. (of record).

Regarding claims 27-29, Tobin disclosed all, but that the matrix is applied in a rolling operation, a wrapping operation, or is circumferentially or vertically applied.

Healey teaches the conventionality of applying the matrix during manufacture of a fuse in a rolling operation, a wrapping operation, or a circumferential application (see Fig. 15 and columns 11-13).

Therefore, applying the aforementioned known techniques for making the fuse of Tobin would have yield predictable results (i.e. improved mechanical characteristics of the fuse housing), and therefore, would have been obvious to try to an artisan in the fuse art at the time of the invention with reasonable expectation of success. *KSR v. Teleflex*, 550 U.S. \_\_\_, 127 S. Ct. 1727 (2007).

Further, with respect to claim 30, it would have been obvious to one of ordinary skill in the art to use a woven fabric (that inherently has much of it's fibers in a predetermined orientation), and applying said fibers vertically as an alternate equivalent means of applying the matrix to the fuse of Healey. Such a process would yield the same end result.

Regarding claim 37, it would have been obvious to fill the fuse of Tubin with an electrical arc quenching medium in order to prevent arcing, since Healey teaches filling the fuse with an electrical arc-quenching medium (col. 5, lines 66-8).

9. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tubin in view of US/4,028,656 to Schmunk et al (of record).

Regarding claim 26, Tubin teaches the device as applied to claim 25 above. Tubin lacks a heat shrink structure providing UV protection formed over the reinforcing structure.

Schmunk teaches a heat shrink structure (24, column 3 lines 43-47) providing UV protection (column 3 lines 31-32) formed over a fuse tube assembly. It would have been obvious

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to a person of ordinary skill in the fuse art at the of the invention to combine the heat shrink cover of Schmunk with the reinforced fuse structure of Tubin to obtain a fuse better protected from shock and external elements.

### *Response to Arguments*

10. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

### *Conclusion*

11. The additional prior art made of record and cited on PTO-892 was not relied upon, but is considered pertinent to Applicant's disclosure, because of the teachings of electrical fuses with reinforced fuse tubes.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anatoly Vortman whose telephone number is 571-272-2047. The examiner can normally be reached on Monday-Thursday, between 10:00 am and 8:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Jayprakash Gandhi can be reached on 571-272-3740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anatoly Vortman/  
Primary Examiner  
Art Unit 2835

AV